NAVY MEDICINE

WORLD-CLASS CARE...ANYTIME, ANYWHERE

Naval Medical Research Unit - San Antonio

NAMRU-SA is located on the San Antonio Military Medical Center campus, Joint Base Fort Sam Houston, Texas. NAMRU-SA serves as one of the leading research and development laboratories of the U.S. Navy under the DoD and is one of eight subordinate research commands in the global network of laboratories operating under the Naval Medical Research Center (NMRC), Silver Spring, Maryland.

MISSION

Conduct gap driven combat casualty care, craniofacial, and directed energy research to improve survival, operational readiness, and safety of Department of Defense personnel engaged in routine and expeditionary operations.

SCOPE OF RESEARCH

NAMRU-SA scientists conduct basic, applied, and advanced technology research and development. Some work has extended into prototype demonstration in an operational environment.

Join The Conversation:

@NavalMedicalRC

Commanding Officer:

CAPT Thomas C. Herzig
Medical Service Corps
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Executive Officer:

CAPT Barry D. Adams
Medical Service Corps
United States Navy

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Research Directorates

Combat Casualty Care and Operational Medicine:

Expeditionary and Trauma Medicine Department:

Expeditionary and Trauma Medicine Department conducts research focused on the protection, resuscitation, and stabilization of combat casualties at frontline points of care in the combat theater. The Trauma Medicine Group focuses on primary and pre-clinical research for the development and optimization of drug products and advanced therapies for the treatment of hemorrhagic shock. The Expeditionary Medicine Group works to identify and effectively mitigate stressors; improving survivability through the evaluation of products and agents that deliver capabilities to meet rapidly evolving expeditionary warfare requirements.

Cellular and Immune Based Adjuncts for Casualty Care Department:

Cellular and Immune Based Adjuncts for Casualty Care Department conducts research on stem cell and immune based therapeutics intended to improve warfighter outcomes and survival. Stem cell therapeutics focuses on the comparison and assessment of stem cells from different tissue sources, the assessment of protein secretomes or exosomes for preventing and reducing injury from trauma/hemorrhagic shock, and the targeted treatment of severe tissue defects in order to promote tissue repair. Immune based therapeutics explores immunomodulation to prevent and reduce tissue and organ damage resulting from trauma and hemorrhagic shock.

Biomedical Systems Engineering and Evaluation Department:

Biomedical Systems Engineering and Evaluation Department applies engineering principles and design concepts to develop and evaluate medical devices, treatments, and diagnostic tools used in military medicine. Core capabilities include advanced trauma mannequin systems and expertise designing human subjects research studies to evaluate design, safety, efficacy, and human factor aspects of medical devices deployed in prehospital medicine. The department also provides broad engineering expertise for a diverse portfolio of projects within the laboratory, including design and prototype development, computational modeling, custom machining/fabrication, and software development/automation. Recent development efforts include a field-portable sterilization system, an automated electrospinning system used to generate nanofiber scaffolds for wound care, and an imaging system for assessing dental pulp vitality.

Directed Energy Bioeffects Department:

The Directed Energy Bioeffects Program, located at the Tri-Service Research Laboratory, develops diagnostic tools to aid first responders/physicians in identification of distinct injury patterns caused by directed energy sources. These data are also used to establish guidelines to ensure the appropriate care and treatment for directed energy injuries is implemented.

Craniofacial Health and Restorative Medicine:

Biomaterials and Epidemiology Department:

The Biomaterials and Epidemiology Department conducts research, development, testing, and evaluation of biomaterials used in medicine and dentistry and studies the distribution of oral, dental, and craniofacial diseases effecting Sailors and Marines. Research is directed toward analyzing trends and identifying risk factors leading to the improvement of diagnosis, treatment, and prevention of craniofacial and oral injuries and diseases that affect the health and readiness of Sailors and Marines while deployed, ashore, or in garrison.

Maxillofacial Injury and Disease Department:

The Maxillofacial Injury and Disease Department conducts research on the pathophysiology, microbiology, immunology, and etiology of medical and dental diseases leading to the development of novel technologies to increase the armamentarium available to clinicians for the treatment of resistant infections. Current focus areas of research include the development and use of laser-acoustic, nanoparticle, phage, and biomimetic technologies.

Environmental Surveillance Department:

As the lead agent for mercury abatement in Navy Dental Treatment Facilities, the Environmental Surveillance Department is responsible for the development and testing of systems and technologies that minimize the environmental impact and occupational hazards of Navy Dentistry. Focus areas include clinical service life evaluation of existing amalgam separator technology, development of a sensor system to monitor amalgam separator function, and modular amalgam separator prototypes based on proven, existing technology which can increase efficiency and reduce disposal costs.